

US 6238905 B1 USPAT 20010529 125 Thermophilic polymerase III holoenzyme
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FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, SCISEARCH, BIOTECHNO' ENTERED AT
19:33:45 ON 02 DEC 2008

L1 1594589 S POLYMERASE
L2 1 S L1 AND POLC SUBUNIT
L3 97 S L1 AND POL C
L4 31 DUP REM L3 (66 DUPLICATES REMOVED)
L5 0 S L4 AND STEAROTHERMOPHILIS
L6 57 S STEAROTHERMOPHILIS
L7 4 S L6 AND L1

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STN

AN 1986:219832 BIOSIS
DN PREV198681111132; BA81:111132
TI CLONING AND CHARACTERIZATION OF THE POL-C REGION OF
BACILLUS-SUBTILIS.

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SO Journal of Bacteriology, (1986) Vol. 165, No. 3, pp. 951-957.
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DT Article

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AB The polC gene of Bacillus subtilis is defined by five
temperature-sensitive mutations and the 6-(p-hydroxyphenylazo)-uracil
(HPUra) resistance mutation azp-12. Biochemical evidence suggests that
polC codes for the 160-kilodalton DNA polymerase III. A
recombinant plasmid, p154t, was isolated and found to contain the azp-12
marker and one end of the polC gene (N. C. Brown and M. H. Barnes, J.
Cell. Biochem. 78[Suppl.]:116, 1983). The azp-12 marker was localized to
a 1-kilobase DNA segment which was used as a probe to isolate recombinant
lambda phages containing polC region sequences. A complete polC gene was
constructed by in vitro ligation of DNA segments derived from two of the
recombinant phages. The resulting plasmid, pRO10, directed the synthesis
of four proteins of 160, 76, 39, and 32 kilodaltons in Escherichia coli
maxicells. Recombination-deficient (recE) B. subtilis PSL1 containing
pRO10 produced an HPUra-resistant polymerase III activity which
was lost when the strain was cured of pRO10. In vivo, the HPUra
resistance of the plasmid-encoded polymerase III appeared to be
recessive to the resident HPUra-sensitive polymerase III enzyme.